

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE**

P. I. No. 0001098, Oconee County  
STP00-F001-00(098)

**OFFICE** Preconstruction

Jennings Mill Parkway- from SR 316 to Epps Bridge Rd

**DATE** January 18, 2008

**FROM**



Genetha Rice-Singleton, Assistant Director of Preconstruction

**TO**



SEE DISTRIBUTION

**SUBJECT APPROVED REVISED PROJECT CONCEPT REPORT**

Attached for your files is the approval for subject project.

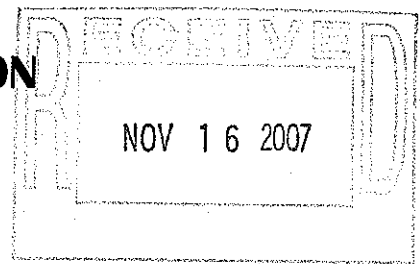
Attachment

**DISTRIBUTION:**

Brian Summers  
Glenn Bowman  
Ken Thompson  
Michael Henry  
Keith Golden  
Angela Alexander  
Paul Liles  
Russell McMurry  
Robert Mahoney  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**



**FILE** STP-F001-00(098) Oconee County  
P. I. 0001098  
Jennings Mill Parkway from SR 316 to Epps Bridge Road  
**OFFICE** Road Design  
**DATE** November 14, 2007

**FROM** Brent A. Story, P.E., State Road & Airport Design Engineer

**TO** Genetha Rice-Singleton, Assistant Director of Preconstruction

**SUBJECT** Revised Project Concept Report

Attached is the original copy of the revised Concept Report for your further handling for approval in accordance with the Plan Development Process (PDP).

Revisions will include extending the project termini on the west end of project approximately 1000-ft. to SR 316 to address the traffic demand at that location, and changing the design speed from 45 MPH to 35 MPH for the mainline (Jennings Mill Parkway).

A 35 mph design speed for Jennings Mill Parkway is needed to minimize vertical reconstruction at the major at-grade intersections at SR 316 and Epps Bridge Road. The lower design speed is warranted because of the commercial/retail development of this area and the closely spaced intersections/signals, and the geometric conditions of the roadway alignment. Designing the mainline to conform to 45 MPH speed design criteria would result in increased right-of-way impacts and cost.

The revised concept report as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Improvement Program (RTIP) and the State Transportation Improvement Program (STIP).

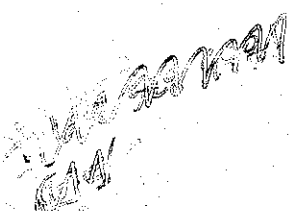
**DATE** 12/14/07

  
State Transportation Planning Administrator

BAS:MBM:ADY

**Attachments**

cc: Brian Summers, Project Review Engineer  
Glenn Bowman, State Environmental/Location Engineer  
Keith Golden, State Traffic and Safety Design Engineer  
Angela T. Alexander, State Transportation Planning Administrator  
Jamie Simpson, State Transportation Financial Management Administrator  
Russell McMurry, District 1 Engineer  
Paul V. Liles, Jr., State Bridge Design Engineer



## REVISED PROJECT CONCEPT REPORT

**Need and Purpose:** See attached Need and Purpose Statement.

**Project location:** Jennings Mill Parkway from SR 316 to Epps Bridge Road is located entirely in Oconee County and is approximately 1.36 miles long.

**MILE POINT REFERENCE:** BEGIN-M.P. 6.92 Oconee Connector  
END-M.P. 0.37 Epps Bridge Road

**Description of the approved concept:** Jennings Parkway on new location from Virgil Langford Road to existing Jennings Mill Parkway at Epps Bridge Road. A 4-lane divided roadway with a 20-foot raised median from Virgil Langford Road to Frontage Road East and a 5-lane section with a footprint for a future 20-foot raised median from Frontage Road East to Epps Bridge Road. The proposed 5-lane section would include a 14-foot two-way left turn lane, two 12-foot inside and two 13-foot outside lanes, two 6-foot bike lanes, with curb and gutter and 5-foot sidewalks on both sides. The 4-lane divided section with the 20-foot median will have 4-foot bike lanes, with curb and gutter and 5-foot sidewalks on both sides. The project also includes bridging Jennings Mill Parkway over SR 10 Loop / Paul Broun Parkway and constructing a half-diamond interchange with northwest facing ramps.

**PDP Classification:** Major  X  Minor

**Federal Oversight:** Full Oversight ( ), Exempt( X ), State Funded( ), or Other ( )

**Functional Classification:** Rural Major Collector

**U. S. Route Number(s):** None **State Route Number(s):** None

**Traffic (AADT) as shown in the approved concept:**

<u>Roadway</u>	<u>Base Year 2005</u>	<u>Design Year 2025</u>
Jennings Mill Parkway (proposed)	15,800	26,000
SR10 Loop/Paul Broun Parkway	28,000	43,700
Jennings Mill Road	9,600	15,200
Virgil Langford Road	6,000	9,600

**Proposed features to be revised:**

- The western terminus for Jennings Mill Parkway at Virgil Langford Road.

The concept for this project tied into Oconee Connector at Virgil Langford Road; however, the Oconee Connector was only built to SR 316. As this project was to provide connectivity between the Oconee Connector / SR 316 across the SR 10 Loop and tie into the existing Jennings Mill Parkway, the western terminus has been revised to the Oconee Connector at SR 316.

- The eastern terminus for Jennings Mill Parkway at Epps Bridge Road.

The logical termini for the eastern end of Jennings Mill Parkway will still remain Epps Bridge Road. The tie in has been revised 583 ft. east of this intersection to address a non-standard break over along the eastern leg of this intersection. The profile will now meet a 35 MPH design speed facilitating travel through this signalized intersection.

- The 45 MPH design speed for Jennings Mill Road. This design speed should be lowered to a 35 MPH design speed for the following reasons:
  1. This project was developed with a 12 ft. urban shoulder along with 2:1 slopes. The project has a design year ADT of 20,600.
  2. This project was developed with a horizontal curve of 450 ft. radius from sta. 164+57 to sta. 168+57. Increasing this radius to meet 45 MPH design would result in a larger right of way impact to Lowe's Home Center and the Wright Land Company parcels.
  3. The vertical tie ins for the projects were developed to meet 35 MPH design at both SR 316 and Epps Bridge Road. Increasing the profiles design speed would result in an extension of the project to the east (lengthen the tie in) and increase impacts to the associated Zaxby's, The Markets at Epps Bridge Road, Ferguson and Britt parcels.
  4. The all intersections along Jennings Mill Parkway are signalized and in relatively close proximity. This may act to moderate travel speed.
  5. Increasing development in this corridor will result in more entrances and turning traffic.
- The functional classification of Rural Major Collector for Jennings Mill Parkway, Jennings Mill Road and Virgil Langford Road. This classification should be revised to Urban Major Collector for the following reasons:
  1. Corridor and area are developing quickly. Many parcels are already commercially developed.
  2. In order to conserve right of way takes and costs, the project was developed with urban features - curb and gutter with raised median, sidewalks, 4% maximum superelevation and 660 ft. median opening spacing.

**Describe the revised feature(s) to be approved:**

- The western terminus for Jennings Mill Parkway is to be revised to SR 316.
- The eastern terminus for Jennings Mill Parkway is to be revised to include the eastern approach to this intersection.

MILE POINT REFERENCE:        BEGIN-0.0 Jennings Mill Parkway  
   END-1.488 Jennings Mill Parkway

- The design speed for Jennings Mill Road will be revised to 35 MPH.

- The functional classification of Jennings Mill Parkway, Jennings Mill Road and Virgil Langford Road will be revised to Urban Major Collector; a 4% maximum superelevation will be utilized.

**Updated traffic data (AADT):**

<u>Roadway</u>	<u>Base Year 2009</u>	<u>Design Year 2029</u>
Jennings Mill Parkway (proposed)	16,600	26,700
SR10 Loop/Paul Broun Parkway	29,600	46,300
Jennings Mill Road	9,300	15,300
Virgil Langford Road	6,300	10,100
Epps Bridge Road	20,000	32,000

**Programmed/Schedule:**

P.E. 2002

R/W: 2007

Construction: 2009

**Revised cost estimates:**

1. Construction cost	\$ 26,011,809
2. Right-of-way cost	\$ 17,915,155
3. Utilities Cost	\$ 192,500
<b>Totals</b>	<b>\$ 44,119,464</b>

Is the project located in a Non-attainment area? .....Yes .....**X** No.

**Recommendation:** This office recommends that the revised concept report be approved.

**Attachments:**

1. Cost Estimate
2. Need and Purpose Statement  
with location map & traffic diagrams

Concur:

  
Director of Preconstruction

Approve:

  
Chief Engineer

## Estimate Report for file "STP-F001-00(098)"

## Section ROADWAY

Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	500000.00	TRAFFIC CONTROL - STP-F001-00(098)	500000.00
153-1300	1	EA	76259.74	FIELD ENGINEERS OFFICE TP 3	76259.74
201-1500	1	LS	4200000.00	CLEARING & GRUBBING - STP-F001-00(098)	4200000.00
207-0203	1600	CY	60.64	FOUND BK FILL MATL, TP II	97024.00
208-0100	488000	CY	10.19	IN PLACE EMBANKMENT	4972720.00
310-1101	83900	TN	17.72	GR AGGR BASE CRS, INCL MATL	1486708.00
318-3000	170	TN	18.92	AGGR SURF CRS	3216.40
402-1812	1700	TN	63.76	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	108392.00
402-3121	22400	TN	64.71	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	1449504.00
402-3130	10200	TN	67.80	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	691560.00
402-3131	230	TN	66.39	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	15269.70
402-3190	11800	TN	65.03	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	767354.00
413-1000	7300	GL	2.07	BITUM TACK COAT	15111.00
430-0820	7800	SY	62.67	CONT REINF CONC PVMT, CL 1 CONC, 12 INCH THK	488826.00
432-5010	6700	SY	2.24	MILL ASPH CONC PVMT, VARIABLE DEPTH	15008.00
433-1100	540	SY	184.49	REINF CONC APPROACH SLAB, INCL CURB	99624.60
441-0104	16400	SY	37.79	CONC SIDEWALK, 4 IN	619756.00
441-0740	1100	SY	31.41	CONCRETE MEDIAN, 4 IN	34551.00
441-0754	910	SY	46.70	CONCRETE MEDIAN, 7 1/2 IN	42497.00
441-4020	210	SY	42.10	CONC VALLEY GUTTER, 6 IN	8841.00
441-4030	670	SY	43.86	CONC VALLEY GUTTER, 8 IN	29386.20
441-6222	30900	LF	17.86	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	551874.00
441-6740	8900	LF	15.09	CONC CURB & GUTTER, 8 IN X 30 IN, TP 7	134301.00
444-1000	150	LF	7.58	SAWED JOINTS IN EXIST PAVEMENTS - PCC	1137.00
446-1100	11300	LF	5.28	PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH	59664.00
500-3101	390	CY	594.75	CLASS A CONCRETE	231952.50
500-3800	44	CY	821.78	CLASS A CONCRETE, INCL REINF STEEL	36158.32
500-9999	35	CY	137.55	CLASS B CONC, BASE OR PVMT WIDENING	4814.25
511-1000	51900	LB	0.94	BAR REINF STEEL	48786.00
550-1180	7400	LF	42.29	STORM DRAIN PIPE, 18 IN, H 1-10	312946.00
550-1182	220	LF	76.76	STORM DRAIN PIPE, 18 IN, H 15-20	16887.20
550-1240	2100	LF	54.59	STORM DRAIN PIPE, 24 IN, H 1-10	114639.00
550-1241	89	LF	60.50	STORM DRAIN PIPE, 24 IN, H 10-15	5384.50
550-1242	120	LF	63.54	STORM DRAIN PIPE, 24 IN, H 15-20	7624.80
550-1243	140	LF	66.34	STORM DRAIN PIPE, 24 IN, H 20-25	9287.60
550-1300	65	LF	73.53	STORM DRAIN PIPE, 30 IN, H 1-10	4779.45
550-1360	680	LF	85.45	STORM DRAIN PIPE, 36 IN, H 1-10	58106.00
550-1361	99	LF	104.31	STORM DRAIN PIPE, 36 IN, H 10-15	10326.69
550-1420	110	LF	128.91	STORM DRAIN PIPE, 42 IN, H 1-10	14180.10
550-1426	450	LF	140.00	STORM DRAIN PIPE, 42 IN, H 35-40	63000.00
550-3318	4	EA	547.78	SAFETY END SECTION 18 IN, STORM DRAIN, 4:1 SLOPE	2191.12
550-3324	2	EA	891.09	SAFETY END SECTION 24 IN, STORM DRAIN, 4:1 SLOPE	1782.18
550-4218	5	EA	688.02	FLARED END SECTION 18 IN, STORM DRAIN	3440.10
550-4224	7	EA	841.23	FLARED END SECTION 24 IN, STORM DRAIN	5888.61
550-4230	1	EA	891.52	FLARED END SECTION 30 IN, STORM DRAIN	891.52
550-4236	6	EA	1290.81	FLARED END SECTION 36 IN, STORM DRAIN	7744.86
550-4242	2	EA	1929.63	FLARED END SECTION 42 IN, STORM DRAIN	3859.26
550-4418	4	EA	489.46	FLARED END SECTION, 18 IN, SLOPE DRAIN	1957.84
550-4424	2	EA	231.76	FLARED END SECTION, 24 IN, SLOPE DRAIN	463.52
550-4430	1	EA	500.00	FLARED END SECTION, 30 IN, SLOPE DRAIN	500.00
550-4436	1	EA	500.00	FLARED END SECTION, 36 IN, SLOPE DRAIN	500.00
573-2006	24300	LF	19.90	UNDDR PIPE INCL DRAINAGE AGGR, 6 IN	483570.00
576-1010	370	LF	8.11	SLOPE DRAIN PIPE, 10 IN	3000.70
576-1018	210	LF	32.37	SLOPE DRAIN PIPE, 18 IN	6797.70
576-1024	79	LF	50.47	SLOPE DRAIN PIPE, 24 IN	3987.13
576-1030	72	LF	75.00	SLOPE DRAIN PIPE, 30 IN	5400.00
576-1036	39	LF	75.00	SLOPE DRAIN PIPE, 36 IN	2925.00
577-1100	10	EA	680.30	METAL DRAIN INLET - COMPLETE ASSEMBLY	6803.00
610-0300	1531	LF	4.50	REM FENCE - STA 712+42 - 727+31 RT	6889.50
610-0300	1058	LF	4.50	REM FENCE - STA 716+94 - 727+97 LT	4761.00
611-8000	3	EA	1838.50	ADJUST CATCH BASIN TO GRADE	5515.50
621-4021	650	LF	425.77	CONCRETE SIDE BARRIER, TYPE 2A	276750.50
621-4022	90	LF	479.41	CONCRETE SIDE BARRIER, TYPE 2B	43146.90
634-1200	181	EA	104.65	RIGHT OF WAY MARKERS	18941.65

641-1100	60	LF	53.72	GUARDRAIL, TP T	3223.20
641-1200	11800	LF	18.49	GUARDRAIL, TP W	218182.00
641-5001	13	EA	648.84	GUARDRAIL ANCHORAGE, TP 1	8434.92
641-5012	17	EA	1829.52	GUARDRAIL ANCHORAGE, TP 12	31101.84
643-4000	7700	LF	5.95	WOVEN WIRE FENCE	45815.00
643-8040	4	EA	676.67	GATE, WOVEN WIRE -	2706.68
643-8200	500	LF	3.70	BARRIER FENCE (ORANGE), 4 FT	1850.00
668-1100	102	EA	2714.66	CATCH BASIN, GP 1	276895.32
668-1110	28	LF	251.66	CATCH BASIN, GP 1, ADDL DEPTH	7046.48
668-1200	1	EA	2872.00	CATCH BASIN, GP 2	2872.00
668-1210	4	LF	303.40	CATCH BASIN, GP 2, ADDL DEPTH	1213.60
668-2100	16	EA	4244.06	DROP INLET, GP 1	67904.96
668-2110	18	LF	310.14	DROP INLET, GP 1, ADDL DEPTH	5582.52
668-2200	2	EA	3992.70	DROP INLET, GP 2	7985.40
668-2210	10	LF	341.25	DROP INLET, GP 2, ADDL DEPTH	3412.50
668-4300	3	EA	2275.73	STORM SEWER MANHOLE, TP 1	6827.19
668-4311	3	LF	288.54	STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 1	865.62
668-4312	5	LF	298.96	STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 2	1494.80
668-8011	25	SF	44.31	SAFETY GRATE, TP 1	1107.75
<b>Section Sub Total:</b>					<b>\$18,999,686.42</b>

**Section PERMANENT EROSION CONTROL**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
441-0204	3500	SY	32.61	PLAIN CONC DITCH PAVING, 4 IN	114135.00
603-2182	1100	SY	62.03	STN DUMPED RIP RAP, TP 3, 24 IN	68233.00
603-7000	1100	SY	4.98	PLASTIC FILTER FABRIC	5478.00
700-6910	60	AC	971.51	PERMANENT GRASSING	58290.60
700-7000	180	TN	60.28	AGRICULTURAL LIME	10850.40
700-7010	150	GL	19.81	LIQUID LIME	2971.50
700-8000	42	TN	348.95	FERTILIZER MIXED GRADE	14655.90
700-8100	3000	LB	2.15	FERTILIZER NITROGEN CONTENT	6450.00
710-9000	23135	SY	3.76	PERMANENT SOIL REINFORCING MAT	86987.60
716-2000	60750	SY	1.23	EROSION CONTROL MATS, SLOPES	74722.50
<b>Section Sub Total:</b>					<b>\$442,774.50</b>

**Section TEMPORARY EROSION CONTROL**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	30	AC	564.57	TEMPORARY GRASSING	16937.10
163-0240	270	TN	178.21	MULCH	48116.70
163-0300	8	EA	2571.07	CONSTRUCTION EXIT	20568.56
163-0501	1	EA	953.61	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 1	953.61
163-0503	17	EA	557.26	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	9473.42
163-0520	4300	LF	16.93	CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN	72799.00
163-0522	280	EA	150.00	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS - TYPE A SILT FENCE	42000.00
163-0523	350	EA	250.00	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS - TYPE C SILT FENCE	87500.00
163-0530	1250	LF	3.71	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	4637.50
163-0531	33	EA	8227.25	CONSTRUCT AND REMOVE SEDIMENT BASIN, TP 1, STA NO -	271499.25
163-0550	124	EA	305.97	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	37940.28
165-0010	2400	LF	0.97	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	2328.00
165-0030	7100	LF	1.74	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	12354.00
165-0040	630	EA	82.07	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	51704.10
165-0060	33	EA	1329.77	MAINTENANCE OF TEMPORARY SEDIMENT BASIN, STA NO -	43882.41
165-0070	630	LF	2.16	MAINTENANCE OF BALED STRAW EROSION CHECK	1360.80
165-0085	1	EA	284.45	MAINTENANCE OF SILT CONTROL GATE, TP 1	284.45
165-0087	17	EA	188.84	MAINTENANCE OF SILT CONTROL GATE, TP 3	3210.28
165-0101	8	EA	677.10	MAINTENANCE OF CONSTRUCTION EXIT	5416.80
165-0105	124	EA	107.01	MAINTENANCE OF INLET SEDIMENT TRAP	13269.24
167-1000	2	EA	1363.64	WATER QUALITY MONITORING AND SAMPLING	2727.28
167-1500	24	MO	1047.62	WATER QUALITY INSPECTIONS	25142.88
171-0010	4750	LF	2.08	TEMPORARY SILT FENCE, TYPE A	9880.00
171-0030	14100	LF	4.06	TEMPORARY SILT FENCE, TYPE C	57246.00
<b>Section Sub Total:</b>					<b>\$841,231.66</b>

**Section SIGNING AND MARKING**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
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500-3101	6	CY	594.75	CLASS A CONCRETE	3568.50
636-1020	275	SF	14.94	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	4108.50
636-1033	580	SF	19.27	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	11176.60
636-1041	18	SF	30.43	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 9	547.74
636-1077	410	SF	30.12	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 9	12349.20
636-2070	275	LF	8.29	GALV STEEL POSTS, TP 7	2279.75
636-2080	1350	LF	11.35	GALV STEEL POSTS, TP 8	15322.50
636-2090	40	LF	8.48	GALV STEEL POSTS, TP 9	339.20
636-3000	2835	LB	4.91	GALV STEEL STR SHAPE POST	13919.85
636-5010	25	EA	44.05	DELINEATOR, TP 1	1101.25
636-5011	5	EA	8.07	DELINEATOR, TP 1A	40.35
636-5020	15	EA	54.11	DELINEATOR, TP 2	811.65
636-9094	50	LF	121.13	PILING IN PLACE, SIGNS, STEEL H, HP 12 X 53	6056.50
638-1001	1	LS	83661.98	STR SUPPORT FOR OVERHEAD SIGN, TP 1, STA - 707+25 (SR 10 LOOP) - STP-F001-00(098)	83661.98
639-2002	570	LF	3.33	STEEL WIRE STRAND CABLE, 3/8 IN	1898.10
639-4002	4	EA	6610.02	STRAIN POLE, TP II	26440.08
639-4003	2	EA	5990.42	STRAIN POLE, TP III	11980.84
652-0094	10	EA	48.03	PAVEMENT MARKING, SYMBOL, TP 4	480.30
652-0110	10	EA	42.08	PAVEMENT MARKING, ARROW, TP 1	420.80
652-5301	13860	LF	0.20	SOLID TRAF STRIPE, 6 IN, WHITE	2772.00
652-5451	1590	LF	0.21	SOLID TRAFFIC STRIPE, 5 IN, WHITE	333.90
652-6301	1335	GLF	0.16	SKIP TRAF STRIPE, 6 IN, WHITE	213.60
652-6501	1335	GLF	0.24	SKIP TRAFFIC STRIPE, 5 IN, WHITE	320.40
653-0120	113	EA	70.40	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	7955.20
653-0170	6	EA	78.15	THERMOPLASTIC PVMT MARKING, ARROW, TP 7	468.90
653-0210	18	EA	115.47	THERMOPLASTIC PVMT MARKING, WORD, TP 1	2078.46
653-1501	44850	LF	0.60	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	26910.00
653-1502	35570	LF	0.61	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	21697.70
653-1704	740	LF	5.34	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	3951.60
653-1804	8140	LF	1.86	THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE	15140.40
653-1810	1100	LF	1.55	THERMOPLASTIC SOLID TRAF STRIPE, 10 IN, WHITE	1705.00
653-3501	16410	GLF	0.54	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	8861.40
653-3502	9590	GLF	0.31	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, YELLOW	2972.90
653-6004	1170	SY	2.70	THERMOPLASTIC TRAF STRIPING, WHITE	3159.00
653-6006	740	SY	3.32	THERMOPLASTIC TRAF STRIPING, YELLOW	2456.80
654-1001	290	EA	3.63	RAISED PVMT MARKERS TP 1	1052.70
654-1003	780	EA	3.70	RAISED PVMT MARKERS TP 3	2886.00
657-1085	910	LF	6.75	PREFORMED PLASTIC SOLID PVMT MKG, 8 IN, CONTRAST (BLACK-WHITE), TP PB	6142.50
657-3085	530	GLF	5.09	PREFORMED PLASTIC SKIP PVMT MKG, 8 IN, CONTRAST (BLACK-WHITE), TP PB	2697.70
657-5017	3	EA	354.64	PREFORMED PLASTIC PVMT MKG, WORDS AND/OR SYM, ARROW TP 2, WHITE, TP PB	1063.92
657-6085	610	LF	6.68	PREFORMED PLASTIC SOLID PVMT MKG, 8 IN, CONTRAST (BLACK-YELLOW), TP PB	4074.80
<b>Section Sub Total:</b>					<b>\$315,418.57</b>

**Section SIGNALIZATION**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-1041	180	SF	30.43	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 9	5477.40
639-4004	18	EA	6199.94	STRAIN POLE, TP IV	111598.92
647-1000	1	LS	100000.00	TRAFFIC SIGNAL INSTALLATION NO - 1 - STP-F001-00(098)	100000.00
647-1000	1	LS	100000.00	TRAFFIC SIGNAL INSTALLATION NO - 2 - STP-F001-00(098)	100000.00
647-1000	1	LS	100000.00	TRAFFIC SIGNAL INSTALLATION NO - 3 - STP-F001-00(098)	100000.00
647-1000	1	LS	100000.00	TRAFFIC SIGNAL INSTALLATION NO - 4 - STP-F001-00(098)	100000.00
647-1000	1	LS	100000.00	TRAFFIC SIGNAL INSTALLATION NO - 5 - STP-F001-00(098)	100000.00
647-2140	4	EA	1749.45	PULL BOX, PB-4	6997.80
647-2150	5	EA	2040.32	PULL BOX, PB-5	10201.60
682-6120	630	LF	15.24	CONDUIT, RIGID, 2 IN	9601.20
682-6222	3300	LF	10.55	CONDUIT, NONMETL, TP 2, 2 IN	34815.00
935-1113	4000	LF	3.07	OUTSIDE PLANT FIBER OPTIC CABLE, LOOSE TUBE, SINGLE MODE, 24 FIBER	12280.00
935-1511	250	LF	2.59	OUTSIDE PLANT FIBER OPTIC CABLE, DROP, SINGLE MODE, 6 FIBER	647.50
935-1521	50	LF	1.84	OUTSIDE PLANT FIBER OPTIC CABLE, DROP, MULTI MODE, 6 FIBER	92.00
935-3103	6	EA	707.97	FIBER OPTIC CLOSURE, UNDERGROUND, 24 FIBER	4247.82
935-4010	20	EA	42.20	FIBER OPTIC SPLICE, FUSION	844.00



935-6561	1	EA	1600.00	EXTERNAL TRANSCEIVER, DROP AND REPEAT, 1300 MULTI MODE, (SIGNAL JOBS)	1600.00
935-6562	5	EA	1710.14	EXTERNAL TRANSCEIVER, DROP AND REPEAT, 1310 SINGLE MODE, (SIGNAL JOBS)	8550.70
935-8000	1	LS	10000.00	TESTING - STP-F001-00(098)	10000.00
<b>Section Sub Total:</b>					<b>\$716,953.94</b>

**Section BRIDGE ITEMS**

Item Number	Quantity	Units	Unit Price	Item Description	Cost
211-0200	556	CY	75.10	BRIDGE EXCAVATION, GRADE SEPARATION	41755.60
441-0004	909	SY	51.53	CONC SLOPE PAV, 4 IN	46840.77
500-0100	2167	SY	4.32	GROOVED CONCRETE	9361.44
500-1006	814	LS	1079.75	SUPERSTR CONCRETE, CL AA, BR NO - 1 - STP-F001-00(098)	878916.50
500-3002	498	CY	668.67	CLASS AA CONCRETE	332997.66
507-9001	696	LF	109.99	PSC BEAMS, AASHTO TYPE I, BR NO - 1	76553.04
507-9003	2848	LF	144.38	PSC BEAMS, AASHTO TYPE III, BR NO - 1	411194.24
511-1000	79759	LB	0.94	BAR REINF STEEL	74973.46
511-3000	168377	LS	0.94	SUPERSTR REINF STEEL, BR NO - 1 - STP-F001-00(098)	158274.38
520-2214	1155	LF	49.59	PILING, PSC, 14 IN SQ	57276.45
520-2218	3645	LF	59.21	PILING, PSC, 18 IN SQ	215820.45
520-3214	1	EA	5458.47	TEST PILE, PSC, 14 IN SQ	5458.47
520-3218	1	EA	7861.26	TEST PILE, PSC, 18 IN SQ	7861.26
520-4214	1	EA	1286.47	LOAD TEST, PSC, 14 IN SQ	1286.47
520-4218	1	EA	1263.70	LOAD TEST, PSC, 18 IN SQ	1263.70
643-1152	484	LF	23.14	CH LK FENCE, ZC COAT, 6 FT, 9 GA	11199.76
<b>Section Sub Total:</b>					<b>\$2,331,033.65</b>

**Total Estimated Cost: \$23,647,098.74****Subtotal Construction Cost \$23,647,098.74**

E&amp;C Rate 10 % \$2,364,709.87

Inflation Rate 0.0 % @ 0.0 Years \$0.00

**Total Construction Cost \$26,011,808.61**

Right Of Way \$0.00

ReImb. Utilities \$0.00

**Grand Total Project Cost \$26,011,808.61**

## Preliminary Right-Of-Way Cost Estimate

**Donald E. Brown**  
Right of Way Administrator

**Date:** January 5, 2006  
**Project:** STP-F001-00 (098) Oconee  
**Existing/Required R/W:** Varies/Varies  
**Project Termini:** Jennings Mill Parkway Extension  
**Project Description:** Jennings Mill Parkway Extension

**P.I. Number:** 0001098  
**No. Parcels:** 38

### Land:

#### Residential/Agricultural

970,391 SF x \$2.00 /SF

\$1,940,782.00

---

**Total Residential Land** \$1,940,782.00

#### High Commercial

55,665 SF x \$12.00 /SF

\$667,980.00

#### Medium Commercial

343,019 SF x \$7.00 /SF

\$2,401,133.00

---

**Total Commercial Land** \$3,069,113.00

**Total Land** \$5,009,895.00

### Improvements:

Signs & Miscellaneous Site Improvements =

\$100,000.00

### Relocation:

\$0.00

### Damages:

\$50,000.00

#### Net Cost

\$5,159,895.00

Scheduling Contingency

55%

\$2,837,942.25

Admin./Court Cost

60%

\$4,798,702.35

Inflation Factor

40%

\$5,118,615.84

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\$17,915,155.44

**Total Cost**

**\$17,915,155.44**

**Rounded**

**\$17,915,155.00**

Prepared By: \_\_\_\_\_

Moreland Altobelli Associates, Inc.

\_\_\_\_\_  
GDOT R/W

For your use as requested is the following utility cost estimate for the subject project:

<u>UTILITY OWNERS</u>	<u>ESTIMATE</u>
Ga. Power-Distribution	30,000.00
Ga. Power-Transmission	0.00
Walton EMC	18,000.00
Bellsouth	80,000.00
AT&T	0.00
Charter Communications	14,500.00
Atlanta Gas Light	0.00
Oconee County Utilities	50,000.00

**TOTAL \$192,500.00**

Please advise if any additional info is needed.

Thanks,

*Thomas E. Davis*

Georgia Department of Transportation  
District Utilities Engineer  
Gainesville District Office  
P.O. Box 1057  
Gainesville, GA 30503  
Phone—(770) 532-5510  
Fax—(770) 532-5581  
Southern Line # 21005

## **1 NEED AND PURPOSE**

Construction of the Jennings Mill Parkway Extension, and associated roadway improvements, is needed to improve connectivity within the existing secondary roadway network that supports the primary roadway facilities of SR 316 and the SR 10 Loop (Paul Broun Parkway). It would also provide access to a planned regional development node. As the area around the interchange of SR 316 and the SR 10 Loop continues to develop as a regional commercial node, this project has been identified as a key part of the long-range comprehensive planning for both Clarke and Oconee Counties in order to provide sustainable access and mobility within the area.

### **1.1 Planning Basis for Action**

#### **1.1.1 Project Development**

Construction of the Jennings Mill Parkway Extension has been identified by the Madison Athens-Clarke Oconee Regional Transportation Study (MACORTS) as a necessary project to provide transportation access, capacity, and mobility as a result of the rapid growth in the northern portion of Oconee County. This body includes the southern portion of Madison County, all of Athens-Clarke County and the northern half of Oconee County, and is responsible for implementing comprehensive and cooperative transportation projects within its boundaries. As one of 11 Metropolitan Planning Organizations (MPOs) in the State of Georgia, it publishes two primary documents, the annual Transportation Improvement Program (TIP) that covers a short-term, 3-year project horizon, and the long-term Transportation Plan (TP) that covers a 20-year project horizon. Other contributing MACORTS members include the Georgia Department of Transportation (GDOT), the Federal Highway Administration (FHWA), the University of Georgia, the Citizens Advisory groups, and the Athens/Clarke County Unified Government.

The proposed project is currently listed in the MACORTS Fiscal Year (FY) 2004-2006 TIP plan as Jennings Mill Parkway Phase I New Construction (see Project No. 9 in Figure 1: MACORTS Projects), and has been included in the GDOT State Transportation Improvement Program (STIP) and the GDOT 6-year construction work program (CWP). Within the project limits, the Jennings Mill Parkway Extension would be constructed as an urban multilane section with a raised or flush median and would be classified as an urban minor arterial. As an urban minor arterial, the facility would serve as the primary connection across the SR 10 Loop for traffic originating from the Oconee Connector and SR 316 to improve intra-community continuity by providing adequate area-wide circulation for the distribution of local trips. The project would extend the recently constructed Oconee Connector onto new location across the SR 10 Loop and would tie into the existing Jennings Mill Parkway at Epps Bridge Road (CR 261) (see Figure 2: Project Location Map).

The proposed project would upgrade existing facilities, reestablish severed connections and establish more direct and efficient traffic movements through the area. The proposed improvements would also introduce an arterial class facility (Jennings Mill Parkway) between the existing limited access facilities of the SR 10 Loop and SR 316 and the local roadway network. This facility would accommodate the existing growth that is occurring in the area and would improve regional mobility.

Figure 3: Future Land Use Plan

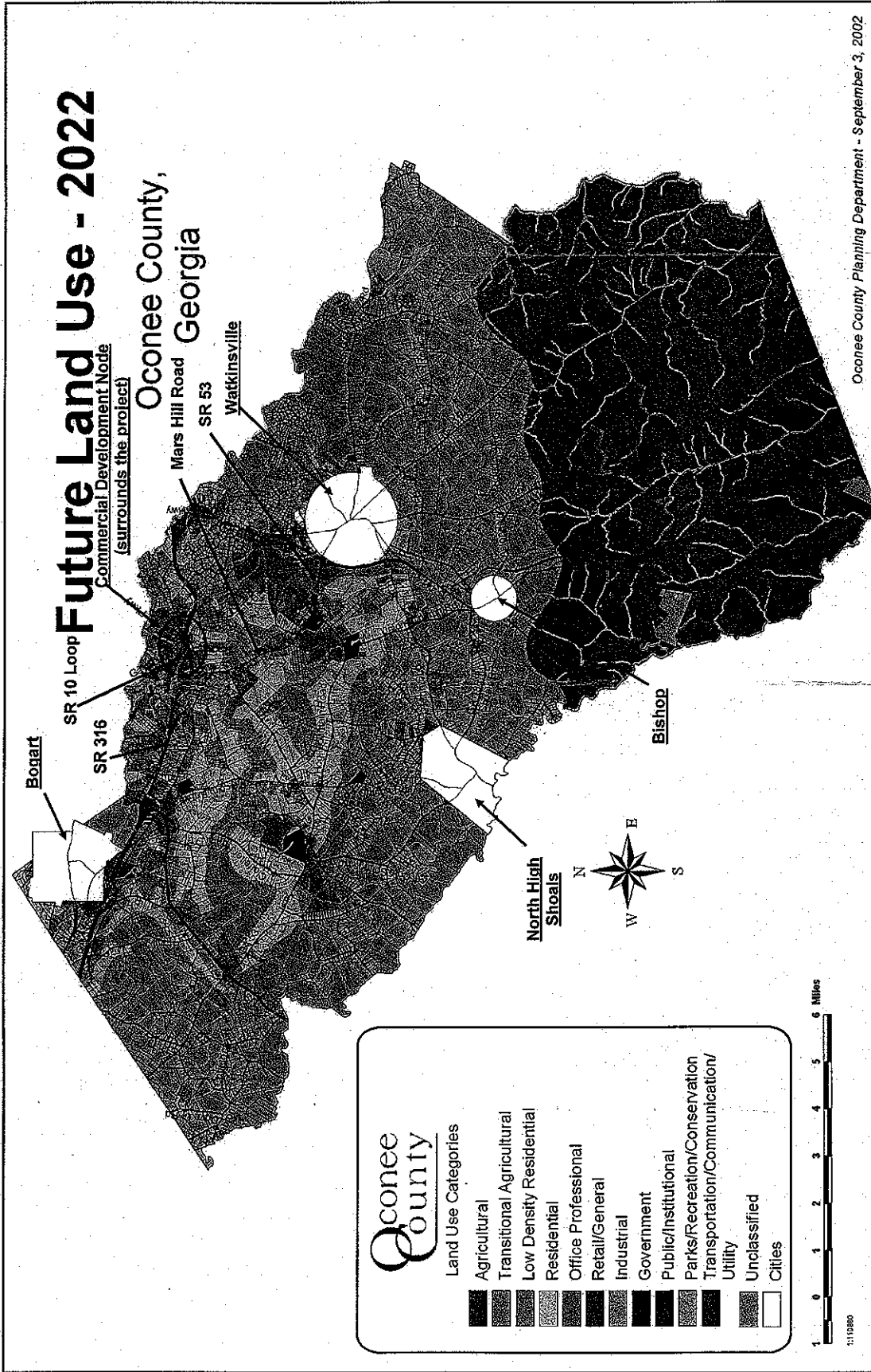
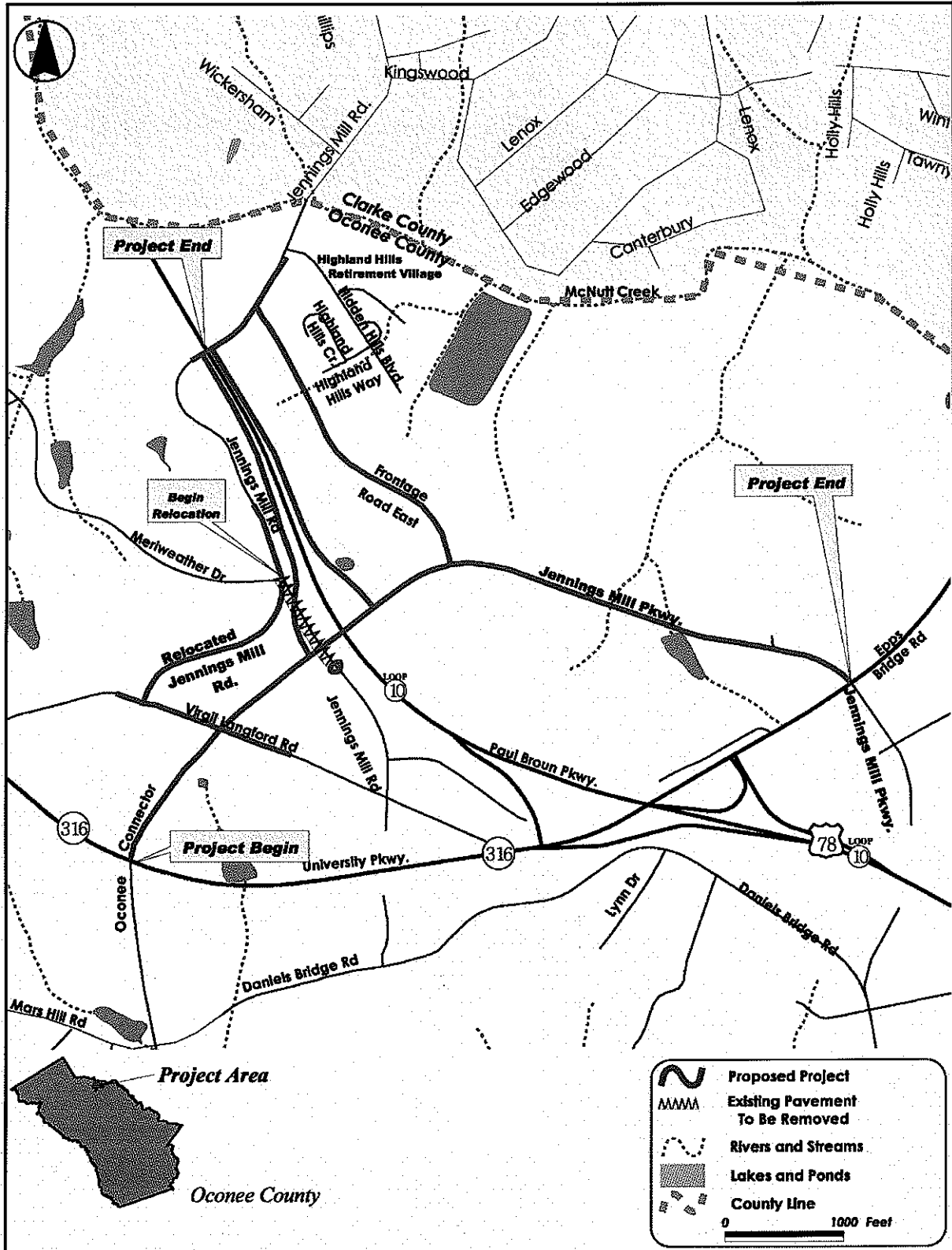


Figure 2: Project Location Map



### **1.1.2 Existing Roadway Facilities**

Jennings Mill Road is a rural two-lane collector roadway that provides access for local traffic to residential areas in northern Oconee County and Clarke County. The existing section of Jennings Mill Parkway west of Epps Bridge Road is currently a short four lane divided urban roadway that serves as an access driveway for a home improvement store. East of Epps Bridge Road, Jennings Mill Parkway has the same typical section and provides access to a small commercial shopping center. Virgil Langford Road is a two-lane roadway that is part of the small network of rural roads near the western project terminus and provides a connection to Jennings Mill Road and SR 316. The Oconee Connector is a two-lane roadway that connects Daniels Bridge Road to SR 316. North of SR 316, the Oconee Connector connects into the existing Jennings Mill Road. The SR 10 Loop is a multilane principal arterial with limited access that provides high-speed regional mobility around the City of Athens. State Route 316 is also a multilane principal arterial that has limited access in parts of Gwinnett County to the west of Oconee County and which serves as the principal route for high-speed access between Athens and Atlanta. Epps Bridge Road is a four-lane divided urban arterial that currently provides direct access to SR 316 and the SR 10 Loop and intersects the existing section of Jennings Mill Parkway in the area of the project's eastern terminus.

### **1.1.3 History of Area Transportation Network**

The project study area has experienced significant changes in land use and roadways that has significantly altered travel demand and traffic patterns. As a result of the completion of the SR 10 Loop as a limited access facility in the 1980s, and the extension of SR 316 to the SR 10 Loop during the 1990s, a number of previously intersecting cross-streets have been severed. These include Daniels Bridge Road (CR 35), Virgil Langford Road and Jennings Mill Road. These secondary roadways have historically provided access for local residents of Oconee County traveling between Athens and Watkinsville (refer to Figure 2).

The recently constructed Oconee Connector has served to re-establish an at-grade crossing of SR 316 by connecting Mars Hill Road and Daniels Bridge Road south of SR 316 to Jennings Mill Road north of SR 316. As a result of these improvements motorists are now brought onto improved multilane facilities that operate efficiently; however, once they depart from these facilities, the existing local road network does not provide sufficient connectivity to effectively distribute traffic to and through the area.

Jennings Mill Road is the only existing route for local traffic to cross the SR 10 Loop without using SR 316 and Epps Bridge Road. Jennings Mill Road terminates into US 78 Business (Atlanta Highway), which provides direct access into downtown Athens. Currently, Jennings Mill Road is adequate for this purpose; however, upon construction of the planned commercial development, this roadway would be significantly overburdened and would not provide the necessary connectivity required by the development.

### **1.1.4 Economic Development and Future Land Use Trends Impacting Transportation**

Oconee County is experiencing rapid economic and residential growth that, in spite of many years of planning and infrastructure development, is placing significant pressure on its transportation system, as well as its water, sewer, and school systems. The proposed project is

part of a number of necessary transportation improvements to accommodate this growth. The population of Oconee County has increased from 7,915 in 1970, about the time when most of the major county roads were being constructed, to 26,225 as of the 2000 U.S. census. As reported in the 1999 Oconee County Comprehensive Plan, the heaviest concentrations of residential development occurs in the northern part of the county along a corridor that consists of sections of SR 53 and Mars Hill Road between Watkinsville and SR 316. Historically, commercial development in the county has been limited to neighborhood and community oriented businesses; however, this corridor is experiencing tremendous growth. This is due to the area's proximity to the major transportation facilities of SR 316 and the SR 10 Loop, the City of Athens and the University of Georgia in neighboring Clarke County; new and existing residential developments in northern Oconee County; and the City of Watkinsville, the county seat for Oconee County. Currently there is over one-half million square feet of retail development in the vicinity of the Epps Bridge/SR 10 Loop interchange.

In the area surrounding the SR 316/SR 10 Loop interchange, over one million square feet of additional retail development is planned to occur. This new development will combine with existing commercial and residential development along Mars Hill Road and SR 53 to focus travel demand and generate additional trips from the major communities within Oconee County, including Watkinsville, Bogart, North Shoals and Bishop, as well as from Athens in neighboring Clarke County. This will result in workers from both counties commuting to jobs across county lines. Subsequently, the secondary roadway network that has historically provided semi-direct access for residents traveling between Athens and Watkinsville will need to be re-established in order to minimize dependence on the higher system facilities, which are more suited for regional travel. The proposed project would improve secondary roadway connectivity within the area to help Oconee County respond to its long-term transportation needs.

The SR 316 corridor is considered to be a transitional area in terms of transportation mobility and adjacent land use development. Land use along this corridor, specifically near the SR 316/SR 10 Loop interchange, will experience significant growth in commercial development (see Figure 3: Future Land Use Plan). In an attempt to accommodate this commercial development, without sacrificing the quality of life, the county has undertaken a transportation plan that is specifically coordinated with the future land use plan. A more detailed discussion of existing and future land use is located in Section **Error! Reference source not found.**, Land Use.

## **1.2 Project Termini**

The proposed logical western terminus of the Jennings Mill Parkway Extension would occur at the intersection of SR 316 and the Oconee Connector. Under the future build condition, it is projected that approximately 52 percent of the PM peak hour traffic on the southbound approach of Jennings Mill Parkway would continue south onto the Oconee Connector, approximately 30 percent would turn left onto SR 316 and 18 percent would turn right onto SR 316 (see Section 1.3.1). Given the proposed split in traffic and the system connectivity provided by SR 316 to the east and west of this intersection and the Oconee Connector south of this intersection, this location was chosen as the logical western terminus. There is currently another planned project (refer to Project No. 3 SR 53 & Mars Hill Road Widening in Figure 1) that would include improvements to the intersection of the Oconee Connector and SR 316. If that project is not released for construction prior to this project, then this project would extend through that intersection, and the improvements would occur within the SR 316 right-of-way.



Figure 1: MACORTS Projects

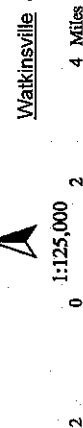
# **Madison Athens-Clarke Oconee Regional Transportation Study** **MACORTS Transportation Improvement Program (TIP) Projects, FY 2004 - 2006**

## **Non-Mappable Locally-Funded Programs**

- a. Oconee Co. Intersection Improvement Program (TIP Page V-03)
- b. Oconee Co. Pavement Management Program (TIP Page V-04)
- c. Oconee Co. Traffic Signal Replacement Program (TIP Page V-05)
- d. Oconee Co. Culvert Improvement Program (TIP Page V-06)
- e. Oconee Co. Bridge Maintenance Program (TIP Page V-07)
- f. Athens-Clarke County Right-of-Way Protection Program (TIP Page V-08)
- g. Athens-Clarke County Traffic Signal Replacement Program (TIP Page V-09)
- h. Athens-Clarke County Pavement Management Program (TIP Page V-10)
- i. ATMS Expansion (TIP Page V-11)
- j. Athens-Clarke County Sidewalk Improvement Program (TIP Page V-12)
- k. Athens-Clarke County Bicycle Facilities System Improvements (TIP Page V-13)

Athens

Bogart



Produced by the Madison Athens-Clarke Oconee  
 Regional Transportation Study  
 June 2, 2003

\*This map depicts general project locations,  
 not specific design details.



## **Proposed Road and Highway Projects**

1. Jefferson Road (US 129/78, SR 15) Widening (TIP Page II-01)
2. Danielsville Road Widening (TIP Page II-02)
3. SR 53 & Moss Hill Road Widening (TIP Page II-03)
4. Macon Highway Widening (TIP Page II-04)
5. Lexington Road (US 78, SR 10) Widening (TIP Page II-05)
6. US 441, SR 24 from Watkinsville Widening (TIP Page II-09)
7. Snodgrass Bridge Road Widening (TIP Page II-14)
8. SR 8 Median Turn Lanes (TIP Page II-15)
9. Jennings Mill Parkway Phase I New Construction (TIP Page II-16)

## **Proposed Intersection/Interchange Projects**

10. Athens Perimeter at Olympic Drive/Peter Street Replacement (TIP Page II-06)
11. Athens Perimeter at US 78/Lexington Road Widening (TIP Page II-07)
12. Reconstruct Atlanta Highway/SR 10 Loop (TIP Page II-08)
13. Indian Hills Road/Winterville Road Realignment (TIP Page II-10)
14. Athens Drive/Spring Valley Road Improvements (TIP Page II-11)
15. Cedar Shoals Road/Gaines School Road Improvements (TIP Page II-12)
16. Hawthorne Avenue/Old West Broad Street Improvements (TIP Page II-13)
17. SR 316 Interchanges in Oconee County (TIP Page II-17)

## **Proposed Bridge Projects**

18. Macon Highway/Middle Oconee River Improvement (TIP Page IV-01)
19. College Station Road/North Oconee River Improvement (TIP Page IV-02)

## **Proposed Locally-Funded Projects**

20. Lumpkin Street Miscellaneous Improvements (TIP Page V-01)
21. Jennings Mill Parkway Phase II New Construction (TIP Page V-02)
22. Atlanta Highway/SR 10 Loop Connector New Construction (TIP Page V-14)
23. Mitchell Bridge Road Widening (TIP Page V-15)

## **Other Projects**

24. Multi Modal Transportation Center (TIP Page V-16)
25. Rail-Trail from Barnett Shoals Road to Multi Modal Center (TIP Page V-17)
26. Oconee Rivers Greenway - existing shown (TIP Page V-18)

The projects shown on this map are part of the MACORTS Transportation Improvement Program for FY 2004 - 2006. TIP documents are available from the Athens-Clarke County Planning Department:

120 W. Dougherty St.  
 Athens, GA 30606  
 706.613.3515  
[info@oconeeclarke.com](mailto:info@oconeeclarke.com)

explaining/aocon/hp04-06.apr

The logical eastern terminus of the proposed project would occur at the intersection of Epps Bridge Road; however, intersection improvements at this location would cause the actual construction limits to extend approximately 300 feet east of the intersection. Immediately west of this intersection, the new roadway would tie into and slightly re-align the existing eastbound approach to the intersection. Under the build condition, it is projected that approximately 56 percent of the PM peak hour traffic on the eastbound approach of Jennings Mill Parkway would turn right onto southbound Epps Bridge Road, with 19 percent continuing through on Jennings Mill Parkway to the east, and 25 percent turning left onto northbound Epps Bridge Road (see Section 1.3.1). Given the anticipated split in traffic this intersection was chosen as the project's eastern terminus.

The proposed Frontage Road East, constructed east of and parallel to the SR 10 Loop, would serve as a collector roadway to provide secondary access to and from the SR 10 Loop and Jennings Mill Road via the new interchange. Currently, motorists must travel a circuitous route on Jennings Mill Road to access areas north of the SR 10 Loop. The logical termini for this roadway would be Jennings Mill Road to the north and Jennings Mill Parkway to the south, as this roadway would accommodate travel to destinations adjacent to the two roadways.

### **1.3 General Traffic Impact and Roadway Access**

As discussed in the previous section, planned commercial development adjacent to the SR 316/the SR 10 Loop interchange will place a significant burden on those existing facilities as well as the existing Jennings Mill Road and the intersection of Epps Bridge Road and Jennings Mill Parkway.

#### **1.3.1 Average Daily Traffic**

The future planned commercial and retail development on the north side of the SR 10 Loop is anticipated to generate an average daily traffic (ADT) volume of over 23,000 vehicles per day (vpd) for the 2025 design year from areas currently served by Jennings Mill Road and the adjoining Oconee Connector. Based on the existing roadway network, Jennings Mill Road would not provide direct access to the development and could not accommodate this projected volume. Rather, access would have to occur via Epps Bridge Road and its intersection with Jennings Mill Parkway. Neither Epps Bridge Road nor the intersection with Jennings Mill Parkway would be able to accommodate this amount of traffic in addition to existing traffic volumes and future background traffic. Additional congestion at the SR 316/SR 10 Loop interchange would also result.

Projections of future traffic volumes were made for the 2005 build year and then projected over a 20-year horizon period to establish the 2025 design year traffic volume conditions with both the project and development in place. These future ADT volume projections are shown in Figure 4: ADT Build Volumes – Years 2005 and 2025 for the length of the project. Peak hour turning movement volumes were then developed for the 2025 design year and were used in determining future capacity and lane configurations at intersections. These volumes are shown in Figure 5: AM/PM 2025 Build Peak Hour Volumes.

Figure 5: AM/PM 2025 Build Peak Hour Volumes

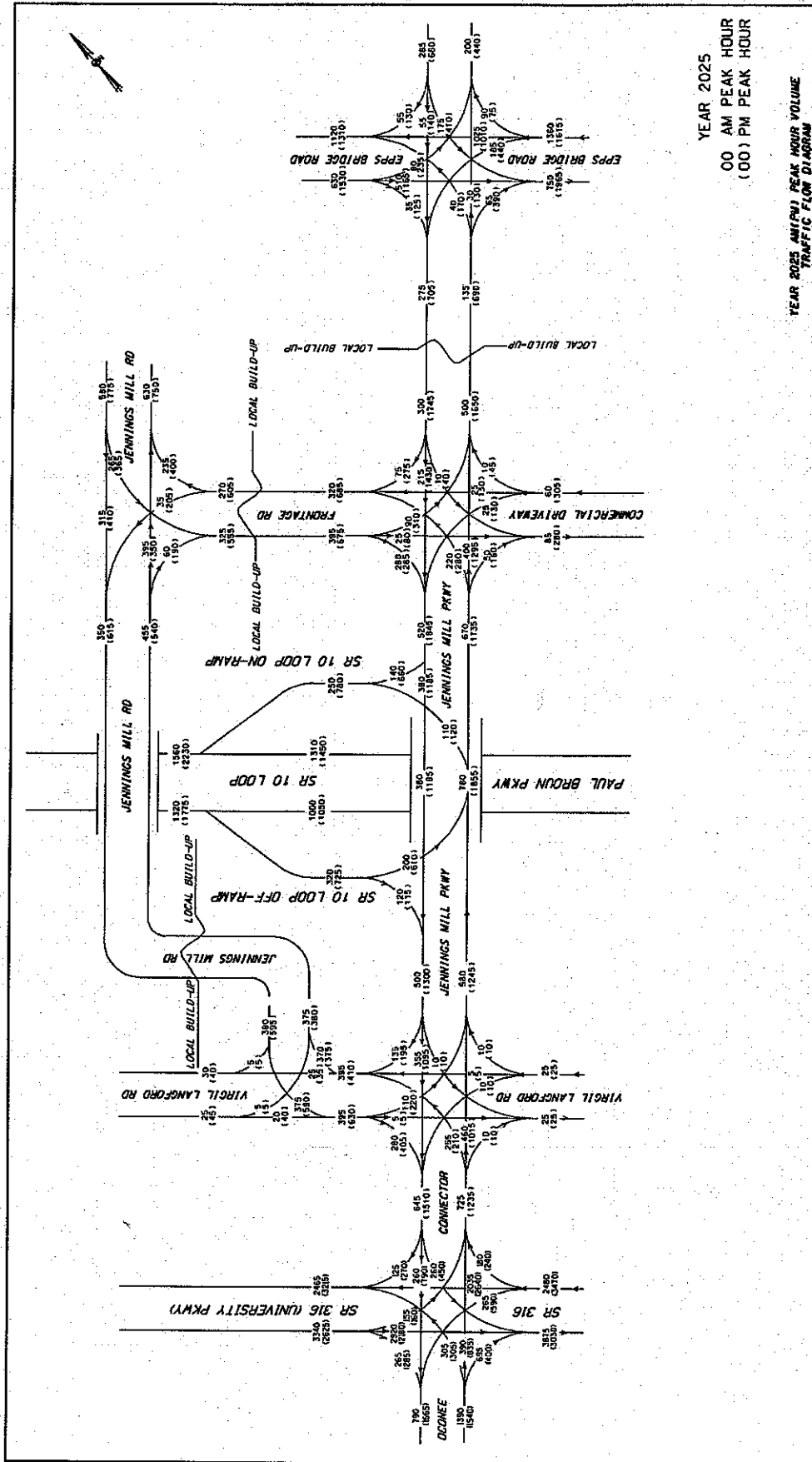
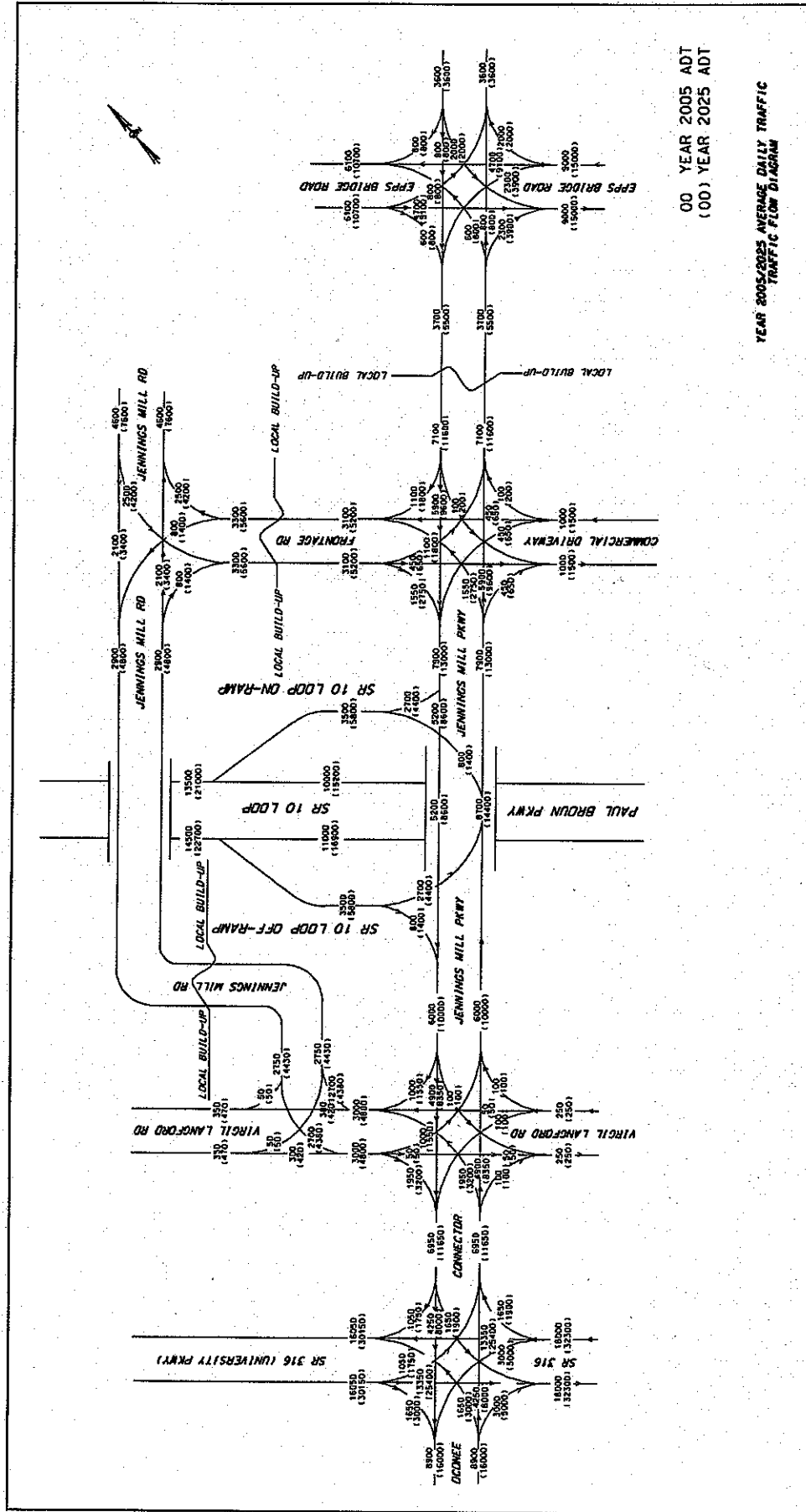


Figure 4: ADT Build Volumes – Years 2005 and 2025



00 YEAR 2005 ADT  
(00) YEAR 2025 ADT

YEAR 2005/2025 AVERAGE DAILY TRAFFIC  
TRAFFIC FLOW DIAGRAM

As a result of the project, the Oconee Connector north of SR 316 would be widened to a four-lane divided section over the existing footprint of Jennings Mill Road and would become part of the new Jennings Mill Parkway. As such, it would connect directly to the development and would be able to adequately carry the projected ADT of 23,000 vpd. The section of Jennings Mill Road south of the SR 10 Loop would remain as a two-lane road, but would be relocated north of its existing location, and is projected to carry an ADT ranging from approximately 9,000 to 10,000 vpd and would continue to be used for commuter traffic and local trips generated by roadside development.

Virgil Langford Road, which currently carries less than 1,000 vpd and only has westbound access to and from SR 316, and would serve as a connection between the relocated Jennings Mill Road and the newly constructed Jennings Mill Parkway. The new Jennings Mill Parkway from Virgil Langford Road to Epps Bridge Road would be constructed as a four-lane divided roadway with a variable raised/flush median and is projected to carry an ADT ranging from approximately 20,000 to 26,000 vpd by the 2025 design year.

The last piece of the proposed project would be the construction of a frontage road on the east side of the SR 10 Loop between Jennings Mill Road to the north and the new Jennings Mill Parkway. This roadway would provide access between the commercial/retail development and the residential areas along Jennings Mill Road to the north without requiring vehicles to cross the SR 10 Loop.

Benefits provided by the proposed improvements include the connection of the Oconee Connector with Epps Bridge Road to the east, providing direct access to the development as well as providing a bypass of the SR 316/SR 10 Loop interchange for local and commercial trips. Access to this planned development would be further enhanced by the construction of an interchange with the SR 10 Loop at the new bridge overpass. The interchange would provide a shorter and more direct alternative access route to the development. The interchange would also provide an alternative access route for vehicles traveling northbound on the Oconee Connector seeking access to northbound SR 10 Loop, in effect bypassing the existing SR 316/SR 10 Loop interchange.

Additional benefits provided by the project include additional travel route options that would improve the distribution of turning movements at specific existing intersections, namely the SR 316/Oconee Connector intersection and the SR 316/SR 10 Loop interchange. The redistribution of trips resulting from the project would help balance traffic between the primary and secondary roadway networks within the project area.

### **1.3.2 Capacity Analysis**

A capacity analysis was performed for each intersection along the project corridor based on the 2025 design hourly volumes (DHV) to determine the future Level of Service (LOS). Level of Service is a measure of the overall intersection efficiency based on the intersection's turning movement (hourly) volume, lane configuration and traffic control operations according to threshold values. Six LOS letters are defined that designate each

level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. The complete range of LOS values are defined as follows and the 2025 LOS analysis results are provided in Table 1.

- Level of Service A represents free flow conditions with minimal to no delay for vehicles approaching an intersection. In some cases, vehicles do not stop at all. Although this LOS is very desirable, it is usually difficult to achieve no matter how many approach lanes are provided.
- Level of Service B is in the range of stable flow with slightly increased delay, but there is generally a good progression of vehicles through the intersection. This LOS is also very desirable and can usually be achieved in rural areas.
- Level of Service C indicates increasing delay as the result of only fair progression through the intersection and longer cycle lengths by the traffic signal. The number of vehicles stopping is significant, though many still pass through without stopping.
- Level of Service D represents a high density of vehicles arriving at an intersection, where the number of vehicles stopping exceeds those that do not stop. Individual cycle failures are noticeable; however, this LOS is experienced and expected in many urban communities, and is more affordable to achieve and maintain.
- Level of Service E represents conditions at or near the capacity level. Intersection delay is very high and indicative of poor progression, long cycle lengths, and frequent cycle failures.
- Level of Service F is used to define forced or breakdown conditions where the number of arriving vehicles exceed the capacity of the approach lanes to the intersection, as well as the amount of time that the traffic signal can clear each approach.

**Table 1: 2025 LOS Results**

Intersection	Type	LOS	
		AM	P M
Jennings Mill Parkway at Virgil Langford Rd	Signalized	B	C
Jennings Mill Pkwy at the SR 10 Loop EB Off-Ramp	Signalized	B	C
Jennings Mill Pkwy at the SR 10 Loop WB On-Ramp	Signalized	A	A
Jennings Mill Pkwy at Frontage Road East	Signalized	B	D
Jennings Mill Road at Frontage Road East	Signalized	B	B

Jennings Mill Pkwy at Epps Bridge Road	Signalized	C	D
Virgil Langford Road at Relocated Jennings Mill Road	Unsignalized	B	C
Oconee Connector at SR 316	Signalized	F	F

The results of the analysis indicate that each of the major intersections along the length of the proposed project would independently operate at LOS D or better for the 2025 design year with the exception of the Oconee Connector at SR 316. The failing level of service projected at the SR 316/Oconee Connector intersection in 2025 is the result of anticipated traffic volume increases on SR 316 that will exceed the through capacity of the roadway in the vicinity of the intersection. This lack of capacity cannot be addressed by this project and would require widening SR 316, which is beyond the scope of this project. It is anticipated that the future capacity deficiencies at this intersection would be resolved by GDOT Project NH-003-2(76). Under this project, this intersection would be converted to an interchange along with 26 other proposed interchanges along SR 316 in Barrow and Oconee Counties. That project is also listed in the MACORTS long-range regional transportation plan.

#### **1.4 Accident History**

Since this is primarily a new location project, there is no available accident data for either Jennings Mill Parkway or the Frontage Road East. However, it is anticipated that the proposed operational improvements would serve to improve the safety of the surrounding, adjoining facilities.

#### **1.5 Other Roadway Projects in the Area**

The proposed project would be coordinated with other planned projects within the area (refer to Figure 1). These projects include GDOT Project NH-003-2(76), P.I. No. 122870 (Project No. 17 in Figure 1), the conversion of SR 316 into a controlled access facility to its terminus at the SR 10 Loop. As part of that project it is anticipated that approximately 26 interchanges through Oconee, Barrow and portions of Gwinnett Counties would be constructed. Currently, eight of the proposed 26 interchanges would occur in Oconee County (refer to Figure 1).

Immediately south of this project, GDOT Project STP-1267(8), P.I. No. 142060 (Project No. 3 in Figure 1), the widening and reconstruction of SR 53, Mars Hill Rd and the Oconee Connector would widen the existing two-lane roadway to a four-lane divided facility with turn lanes and intersection improvements from SR 15 in Watkinsville to SR 316. The GDOT is also evaluating plans to make improvement modifications to the existing SR 316/SR 10 Loop interchange that would include frontage roads<sup>1</sup>.

The proposed project follows and is consistent with the recent construction of the Oconee Connector and, the just mentioned, planned widening of SR 53/Mars Hill Road/Oconee

<sup>1</sup> This project is not shown in Figure 1 as it is only at the concept planning level.

Connector from Watkinsville to the southern terminus of this project. All of these projects are intended to provide sustainable traffic capacity and connectivity to accommodate significant historic and anticipated growth associated with the northeastern portions of Oconee County and the SR 316 corridor, including the City of Watkinsville and the adjoining areas on the southern edge of the Athens metropolitan area. Construction of this project would be a significant part of the Oconee County transportation master plan.



## **1.6 Conclusions**

The proposed project would reduce congestion, increase mobility, and improve operational efficiency by improving the distribution of traffic within the surrounding roadway network. This project is one of a system of planned projects within northeast Oconee County that would significantly improve connectivity between Watkinsville and Athens in neighboring Clarke County. Construction of the Jennings Mill Parkway Extension and the new interchange on the SR 10 Loop would provide direct access to planned commercial development and improve area mobility by providing an additional north-south route for local traffic across the SR 10 Loop and an additional point from which to access it. This project is also consistent with the 1999 Oconee County Comprehensive Plan for improved transportation infrastructure in this area of the County. As SR 316 continues to transition into a limited-access facility, this project would sustain local traffic mobility and improve traffic distribution between the primary and secondary roadway network. The project would take into account expected traffic growth in the area and would provide the most efficient means of moving traffic through intersections as reflected in the resulting LOS for the proposed intersections.